

REMARKS

Reconsideration and allowance of the above reference application are respectfully requested.

The drawings stand objected to as allegedly showing improper cross-sections. The undersigned has reviewed the formal drawings which were filed on May 14, 2002, but has found no crosshatches in those drawings. A courtesy copy of these formal drawings is attached. In any case, it is respectfully suggested that there are no crosshatches within the drawings, and therefore that the rejection is moot.

Numerous claims stand rejected under 35 USC 112, second paragraph as being indefinite. In response, each of these claims is amended herewith to obviate the rejection.

Claims 10-21 and 34-90 stand rejected under 35 USC 102 as allegedly being anticipated by Sekiguchi.

The rejection alleges that the trace of oxygen/nitrogen or zero oxygen/nitrogen falls within the claimed range since rejected claims recite oxygen/nitrogen atoms at a concentration of ... atoms  $\text{cm}^3$  or less. The applicant understands this rejection to be contending that Sekiguchi et al. teaches traces of oxygen/nitrogen or zero oxygen/nitrogen. However, the applicant can not find any such teaching in Sekiguchi. Further, there is no teaching about any specific values of concentrations of

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oxygen/nitrogen in Sekiguchi et al. Therefore, the rejection based in Sekiguchi et al. is respectfully traversed. Claims 10, 11 and 12 are amended in order to recite the concentrations of oxygen/nitrogen to even better point out the distinctions over Sekiguchi.

In view of the above amendments and remarks, therefore, all the claims should be in condition for allowance. A formal notice to that effect is respectfully solicited.

Applicant asks that all claims be allowed. Please apply any charges or credits to Deposit Account No. 06-1050.


Respectfully submitted,

Date: \_\_\_\_\_

3/24/03

  
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Attachment: Copy of formals

Version of marked up claims

Please amend the claims as follows:

10. (Amended) A semiconductor device comprising:

a substrate;

a film comprising aluminum over said substrate; and

an insulating film comprising silicon nitride film on said film comprising aluminum;

wherein said film comprising aluminum contains carbon atoms at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less, oxygen atoms at a concentration of  $8 \times 10^{18}$  atoms·cm<sup>-3</sup> or less, and nitrogen atoms at a concentration of  $7 \times 10^{17}$  atoms·cm<sup>-3</sup> or less.

11. (Amended) A display device comprising:

a substrate;

a gate line over said substrate;

a source line intersected with said gate line over said substrate; and

a pixel at an intersection of said gate line and said source line;

wherein said gate line comprises aluminum and carbon atoms at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less, oxygen atoms at a concentration of  $8 \times 10^{18}$  atoms·cm<sup>-3</sup> or less, and nitrogen atoms at a concentration of  $7 \times 10^{17}$  atoms·cm<sup>-3</sup> or less, and

wherein an insulating film comprising silicon nitride film is formed on said gate line.

12. (Amended) A display device comprising:

a substrate;

a thin film transistor over said substrate, said thin film transistor having a source region, a drain region, a channel region between said source and drain region, and a gate electrode over said channel region;

an insulating film comprising silicon nitride film on said gate electrode;

an interlayer insulating film over said thin film transistor;

a wiring connected to at least said source region or drain region through a contact hole; and

a pixel electrode over said interlayer insulating film,

wherein said gate electrode and wiring are formed from a film comprising aluminum, and

wherein said film comprising aluminum contains carbon atoms at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less, oxygen atoms at a concentration of  $8 \times 10^{18}$  atoms·cm<sup>-3</sup> or less, and nitrogen atoms at a concentration of  $7 \times 10^{17}$  atoms·cm<sup>-3</sup> or less.

13. (Amended) A semiconductor device comprising:

a substrate; and  
a film comprising aluminum over said substrate,  
wherein said film comprising aluminum contains carbon atoms  
at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less and oxygen atoms  
at a concentration of  $8 \times 10^{18}$  atoms·cm<sup>-3</sup> or less.

14. A display device comprising:  
a substrate;  
a gate line over said substrate;  
a source line intersected with said gate line; and  
a pixel at an intersection of said gate line and said  
source line,  
wherein said gate line comprises aluminum, carbon atoms at  
a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less and oxygen atoms at  
a concentration of  $8 \times 10^{18}$  atoms·cm<sup>-3</sup> or less.

15. (Amended) A semiconductor device comprising:  
a substrate;  
a thin film transistor over said substrate, said thin film  
transistor having a source region, a drain region, a channel  
region between said source and drain region, a gate electrode  
over said channel region;

an interlayer insulating film over said thin film transistor;

a wiring connected to said source or drain region through a contact hole; and

a pixel electrode over said interlayer insulating film, wherein said gate electrode and wiring are formed from a film comprising aluminum, and

wherein said film comprising aluminum contains carbon atoms at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less and oxygen atoms at a concentration of  $8 \times 10^{18}$  atoms·cm<sup>-3</sup> or less.

16. (Amended) A semiconductor device according to claim 13, wherein an insulating film comprising silicon nitride film is formed on said film comprising aluminum.

17. A display device according to claim 14, wherein an insulating film comprising silicon nitride film is formed on said gate line.

18. A display device according to claim 15, wherein an insulating film comprising silicon nitride film is formed on said gate electrode.

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19. (Amended) A semiconductor device according to claim 40, wherein an insulating film comprising silicon nitride film is formed on said film comprising aluminum.

20. A display device according to claim 41, wherein an insulating film comprising silicon nitride film is formed on said gate line.

21. A display device according to claim 42, wherein an insulating film comprising silicon nitride film is formed on said gate electrode.

34. (Amended) A semiconductor device according to claim 10, wherein said semiconductor device is provided in an electroluminescence display device.

35. (Amended) A semiconductor device according to claim 10, wherein said semiconductor device is provided in a TV camera.

36. (Amended) A semiconductor device according to claim 10, wherein said semiconductor device is provided in a personal computer.

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37. (Amended) A semiconductor device according to claim 10, wherein said semiconductor device is provided in a car navigation system.

38. (Amended) A semiconductor device according to claim 10, wherein said semiconductor device is provided in a TV projection system.

39. (Amended) A semiconductor device according to claim 10, wherein said semiconductor device is provided in a video camera.

40. (Amended) A semiconductor device comprising:  
a substrate; and  
a film comprising aluminum over said substrate,  
wherein said film comprising aluminum contains carbon atoms at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less and nitrogen atoms at a concentration of  $7 \times 10^{17}$  atoms·cm<sup>-3</sup> or less.

41. A display device comprising:  
a substrate;  
a gate line over said substrate;  
a source line intersected with said gate line over said substrate; and



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a pixel at an intersection of said gate line and said source line;

wherein said gate line comprises aluminum, carbon atoms at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less and nitrogen atoms at a concentration of  $8 \times 10^{16}$  atoms·cm<sup>-3</sup> or less.

42. (Amended) A display device comprising:

a substrate;

a thin film transistor over said substrate, said thin film transistor having a source region, a drain region, a channel region between said source and drain region, a gate electrode over said channel region;

an interlayer insulating film over said thin film transistor;

a wiring connected to said source or drain region through a contact hole; and

a pixel electrode over said interlayer insulating film, wherein said gate electrode and wiring are formed from a film comprising aluminum, and

wherein said film comprising aluminum contains carbon atoms at a concentration of  $5 \times 10^{18}$  atoms·cm<sup>-3</sup> or less and nitrogen atoms at a concentration of  $7 \times 10^{17}$  atoms·cm<sup>-3</sup> or less.

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43. A display device according to claim 11, wherein said display device is an electroluminescence display device.

44. A display device according to claim 11, wherein said display device is provided in a TV camera.

45. A display device according to claim 11, wherein said display device is provided in a personal computer.

46. A display device according to claim 11, wherein said display device is provided in a car navigation system.

47. A display device according to claim 11, said display device is provided in a TV projection system.

48. A display device according to claim 11, said display device is provided in a video camera.

49. A display device according to claim 12, said display device is an electroluminescence display device.

50. A display device according to claim 12, wherein said display device is provided in a TV camera.

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51. (Amended) A display [r] device according to claim 12, wherein said display device is provided in a personal computer.

52. A display device according to claim 12, wherein said display device is provided in a car navigation system.

53. (Amended) A display device according to claim 12, wherein said display device is provided in a TV projection system.

54. (Amended) A display device according to claim 12, wherein said display device is provided in a video camera.

55. (Amended) A semiconductor device according to claim 13, wherein said semiconductor device is provided in an electroluminescence display device.

56. (Amended) A semiconductor device according to claim 13 wherein said semiconductor device is provided in a TV camera.

57. (Amended) A semiconductor device according to claim 13, wherein said semiconductor device is provided in a personal computer.

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58. (Amended) A semiconductor device according to claim 13, wherein said semiconductor device is provided in a car navigation system.

59. (Amended) A semiconductor device according to claim 13, said semiconductor device is provided in a TV projection system.

60. (Amended) A semiconductor device according to claim 13, said semiconductor device is provided in a video camera.

61. A display device according to claim 14, wherein said display device is an electroluminescence display device.

62. A display device according to claim 14, wherein said display device is provided in a TV camera.

63. A display device according to claim 14, wherein said display device is provided in a personal computer.

64. A display device according to claim 14, wherein said display device is provided in a car navigation system.

65. (Amended) A display device according to claim 14, wherein said display device is provided in a TV projection

system.

66. (Amended) A display device according to claim 14, wherein said display device is provided in a video camera.

67. A display device according to claim 15, wherein said display device is an electroluminescence display device.

68. A display device according to claim 15, wherein said display device is provided in a TV camera.

69. (Amended) A display [r] device according to claim 15, wherein said display device is provided in a personal computer.

70. A display device according to claim 15, wherein said display device is provided in a car navigation system.

71. (Amended) A display device according to claim 15, wherein said display device is provided in a TV projection system.

72. (Amended) A display device according to claim 15, wherein said display device is provided in a video camera.

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73. (Amended) A semiconductor device according to claim 40, wherein said semiconductor device is provided in an electroluminescence display device.

74. (Amended) A semiconductor device according to claim 40, wherein said semiconductor device is provided in a TV camera.

75. (Amended) A semiconductor device according to claim 40, wherein said semiconductor device is provided in a personal computer.

76. (Amended) A semiconductor device according to claim 40, wherein said semiconductor device is provided in a car navigation system.

77. (Amended) A semiconductor device according to claim 40, wherein said semiconductor device is provided in a TV projection system.

78. (Amended) A semiconductor device according to claim 40, wherein said semiconductor device is provided in a video camera.

79. A display device according to claim 41, wherein said display device is an electroluminescence display device.

80. A display device according to claim 41, wherein said display device is provided in a TV camera.

81. A display device according to claim 41, wherein said display device is provided in a personal computer.

82. A display device according to claim 41, wherein said display device is provided in a car navigation system.

83. (Amended) A display device according to claim 41, wherein said display device is provided in a TV projection system.

84. (Amended) A display device according to claim 41, wherein said display device is provided in a video camera.

85. A display device according to claim 42, wherein said display device is an electroluminescence display device.

86. A display device according to claim 42, wherein said display device is provided in a TV camera.

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87. (Amended) A display [r] device according to claim 42, wherein said display device is provided in a personal computer.

88. A display device according to claim 42, wherein said display device is provided in a car navigation system.

89. A display device according to claim 42, said display device is provided in a TV projection system.

90. A display device according to claim 42, said display device is provided in a video camera.

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